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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/583,297

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Ingo Speier

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02/03/2010

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EXAMINER

A, MINH D

ART UNIT

PAPER NUMBER

2821

MAIL DATE

DELIVERY MODE

02/03/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,297	Applicant(s) SPEIER, INGO	
	Examiner MINH D. A	Art Unit 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on response dated (10/08/09).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a response to the Applicants' filing on 10/12/06. In virtue of this filing, claims 1-17 are currently presented in the instant application.

Claim Rejections - 35 USC § 103

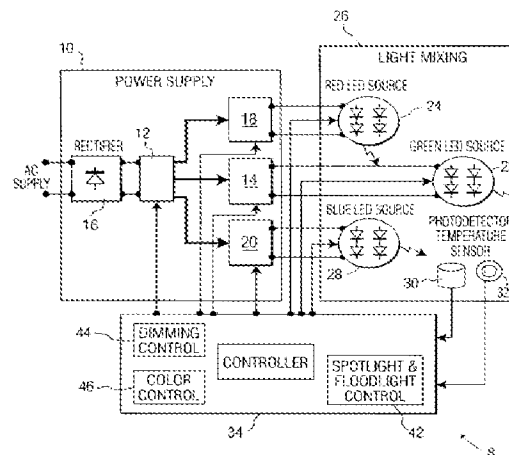
1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muthu et al by (U.S Patent No: 6,441,558) in view of Gotoh (U.S Patent No: 5,384,519).

Regarding claim 1, Muthu et al disclose, in figures 1-2 that, a luminaire system for generating white light with a desired correlated colour temperature(col.2, lines 51-60), the luminaire system comprising: a light module(light mixing(26)) including:

i) one or more white light-emitting elements(light mixing(26)) for generating white light having a particular correlated colour temperature; ii) one or more first colour light-emitting elements(green 22) for generating light of a first colour;



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ii) one or more second(red(24)) colour light-emitting elements for generating light of a second colour; b)a feedback system(controller (34) includes spotlight& floodlight control(42), dimming control(44) and color control(46) for collecting operational temperature information regarding the light module(26); c) a drive(see at least drive(18)) and control system(see controller (34) having a spotlight& flood light control for receiving the signal or information from photo-detector (30)and sensor(328) for receiving said temperature information, and a dimming control(44) for controlling the supply of power to each of the one or more white light-emitting elements(22, 24 and 28), the one or more first colour light-emitting elements, and the one or more second colour light-emitting elements based on the temperature information and the desired correlated colour temperature; and d) an optical system(optical feedback sensor (30) and a temperature feedback sensor(32)) for extracting and mixing the light generated by the light module(26) thereby creating an output beam having the desired correlated colour temperature.Col.3, lines 3-43, col.4, lines 1-31.

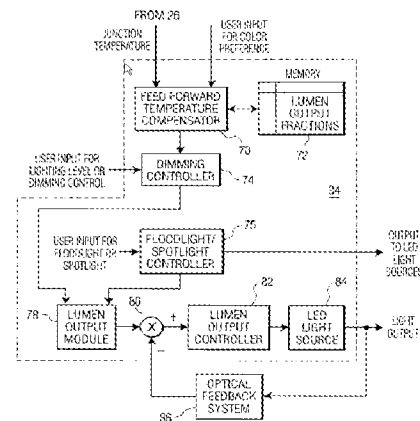


FIG. 2

Muthu et al do not clearly disclose that, the combination color light sources (Red, green, blue or yellow) includes a white light source to produce the colour temperature and wherein the one or more white light-emitting elements are configured to generate the first white light independent of each of the light of the first colour generated by the

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one or more first colour light-emitting elements and the light of the second colour generated by the one or more second light-emitting elements.

Gotoh disclose in figures 5 and 6 on the right that, the combination color light sources (Red, green, blue or yellow) includes a white light source to produce the colour temperature and wherein the one or more white light-emitting elements are configured to generate the first white light independent of each of the light of the first colour generated by the one or more first colour light-emitting elements and the light of the second colour generated by the one or more second light-emitting elements. Col.7, lines 45-67 to col.8, lines 1-15.

It would have been obvious to one having ordinary skill in the art to employ the white source as disclosed in a color mixing method of Gotoh into the white LEd luminary light control system of Muthu to achieve the claimed invention. As disclosed in the color mixing method of Gotoh, the motivation for the combination would be to obtain the maximum luminous flux and would be to obtain sufficient quantity of light with a simpler arrangement.

FIG. 5

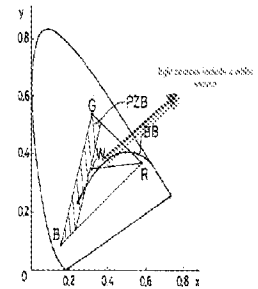
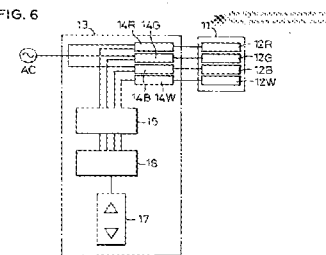


FIG. 6



Regarding claim 2, Muthu et al and Gotoh disclose, wherein the feedback system(controller (34) further comprises one or more optical sensors (30, 328) and spotlight floodlight control(42) as shown in figure 2 above) for collecting optical information relating to light generated by the light module(26), wherein a drive (18) and control system(34) receives said optical information and further controls the supply of power to each of the one or more white light-emitting elements, the one or more first colour light-emitting elements(22), and the one or more second colour light-emitting elements(24) based on the optical information. See figure 1-2 of Muthu et al.

Regarding claim 3, Muthu et al and Gotoh disclose, in figure 1-2 of Muthu et al above that, wherein the light module(26) further comprises one or more third colour light-emitting elements(28) for generating light of a third colour.

Regarding claim 4, Muthu et al and Gotoh disclose, in figure 1-2 of Muthu et al above that, wherein the first colour light-emitting elements generate green light (22).

Regarding claim 5, Muthu et al and Gotoh disclose, in figure 1-2 of Muthu et al above that, wherein the second colour light-emitting elements generate blue or red light(24).

Regarding claim 9, Muthu et al , in figure 1-2 above that of muth et al, a method for generating mixed white light having a desired correlated colour temperature, the method comprising: a) a controller (34) for generating white light having a particular correlated colour temperature by one or more white light-emitting elements(26); b) the controller(34) for generating and mixing in a predetermined portion of light generated by one or more first colour light-emitting elements(26); and c) the controller (34) for

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generating and mixing in a predetermined portion of light generated by one or more second colour light-emitting elements(22); thereby generating mixed white light having the desired correlated colour temperature. Col.3, lines 3-43, col.4, lines 1-31.

Muthu et al do not clearly disclose that, the combination color light sources (Red, green, blue or yellow) includes a white light source to produce the colour temperature and wherein the one or more white light-emitting elements are configured to generate the first white light independent of each of the light of the first colour generated by the one or more first colour light-emitting elements and the light of the second colour generated by the one or more second light-emitting elements.

Gotoh disclose in figures 5 and 6 on the right that, the combination color light sources (Red, green, blue or yellow) includes a white light source to produce the colour temperature and wherein the

one or more

white light-emitting elements

are configured to generate the

first white light independent of

each of the light of the first colour generated by the one or more first colour light-

emitting elements and the light of the second colour generated by the one or more

second light-emitting elements. Col.7, lines 45-67 to col.8, lines 1-15.

It would have been obvious to one having ordinary skill in the art to employ the white source as disclosed in a color mixing method of Gotoh into the white LED luminary light control system of Muthu to achieve the claimed invention. As disclosed in the color

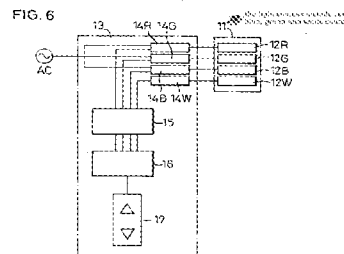
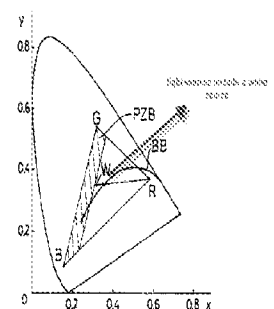


FIG. 5



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mixing method of Gotoh, the motivation for the combination would be to obtain the maximum luminous flux and would be to obtain sufficient quantity of light with a simpler arrangement.

Regarding claim 10, Muthu et al and Gotoh disclose, in figure 1-2 of Muthu et al above that, the step of generating and mixing in light generated by one or more third colour light-emitting elements.

Regarding claim 11, Muthu et al and Gotoh disclose, in figure 1-2 of Muthu et al above that, further comprising the step of detecting an operational temperature of the one or more white light-emitting elements(22, 24 and 28), one or more first colour light-emitting elements and one or more second colour light-emitting elements and (controller (34) having a dimming control) for adjusting operation of the one or more first colour light-emitting elements and one or more second colour light-emitting elements in response to the detected operational temperature.

Regarding claim 12, Muthu et al and Gotoh disclose, in figure 1-2 of Muthu et al above that, the step of detecting optical(optical sensors) characteristics of the mixed white light and a dimming control for adjusting operation of the one or more first colour light-emitting elements and one or more second colour light-emitting elements in response to the detected optical characteristics.

Regarding claim 13, Muthu et al and Gotoh disclose, in figure 1-2 of Muthu et al above that, wherein the first colour light emitting elements generates green light.

Regarding claim 14, Muthu et al and Gotoh disclose, in figure 1-2 of Muthu et al above that, wherein the second colour light emitting elements generates red light.

Regarding claims 6, 15, Muthu et al (558) and Gotoh disclose, in figure 1-2 of Muthu et al (558) above that, wherein the first colour light-emitting elements generate green light (22), the second colour light-emitting elements generate red light (24) and the third colour light-emitting elements generate green light (28).

Muth (159) disclose in figure 1 that, wherein the first colour light-emitting elements generate green light, the second colour light-emitting elements generate blue light and the third colour light-emitting elements generate red light dependent on the USER input for setting the difference colours. Col.6, lines 11-22.



It would have been obvious to one having ordinary skill in the art to employ the user input as suggested by Muthu (159) and Gotoh into the apparatus of Muthu (558) to achieve the claimed invention. As disclosed in Muthu (159), the motivation for the combination would be to obtain a flexible different color.

4. Claims 7-8 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Muthu et al by (U.S Patent No: 6,441,558) in view of Gotoh (U.S Patent No: 5,384,519) as applied to claims 1-2 above, and further in view of Lebens et al (U.S Patent No: 6,488,390).

Regarding claims 7-8,16-17, Muthu et al and Gotoh disclose all of the claimed subject matter, as expressly recited in claims 1-2, except for specifying that, wherein the white light-emitting elements, first colour light-emitting elements and the second colour light emitting elements being manufactured using a similar material technology and wherein the similar material technology is based on indium gallium nitride.

Lebens et al disclose the color LEDs and wherein the color LEDs having the material technology such as on indium gallium nitride. Col.6, lines 45-49.

It would have been obvious to one having ordinary skill in the art to employ the material such as the indium gallium nitride for color LEDs as suggested by Lebens into the plurality of LEDs of Muthu (558) and Gotoh to achieve the claimed invention. As disclosed in Lebens, the motivation for the combination would be to maintain a light intensity.

Response to Arguments

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5. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Regarding independent claim 1, the arguments that ", claim 1 is amended and recites in part "wherein the one of more white light-emitting elements are configured to generate the white light independent of each of the light of the first colour generated by the one or more first colour light-emitting elements and the light of the second colour generated by the one or more second light-emitting elements." Applicants respectfully assert that Muthu '558 does not disclose this claim element" "(see Remarks, page 6, lines 10-14).

Examiner notes that, Mithu (558) disclose all of the claimed subject matter, as expressly recited in claim 1, except for using the one or more first colour light emitting element instead for using the one or

more white light emitting elements, however, selecting or replacing the difference color is well known for design choice and Reference Gotoh (U.S Patent No: 5,384,519) disclose this limitation. Therefore, Claim 1 is rejected under 35 U.S.C. 103(a) as being

unpatentable over by Muthu et al by (U.S Patent No: 6,441,558) in view of Gotoh (U.S Patent No: 5,384,519).

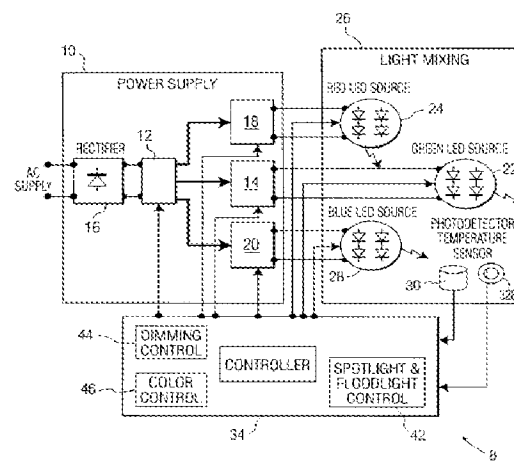


FIG. 1

Regarding independent claim 9, the arguments that "claim 9 is amended and

recites in part "generating, from one or more white light-emitting elements, a first white light independent of each of the first coloured light and the second coloured light." As pointed out above, Muthu (558) combines light from colour light sources to produce white light, and does not generate white light independent of the light generated by each of the colour light-emitting elements.(see Remarks, page 7, lines 14-19).

Examiner notes that, Muthu (558) disclose all of the claimed subject matter, as expressly recited in claim 9, except for generating white light independent of the light generated by each of the colour light-emitting element. However, Gotoh (U.S Patent No: 5,384,519) discloses this limitation. Therefore, Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Muthu et al (U.S Patent No: 6,441,558) in view of Gotoh (U.S Patent No: 5,384,519).

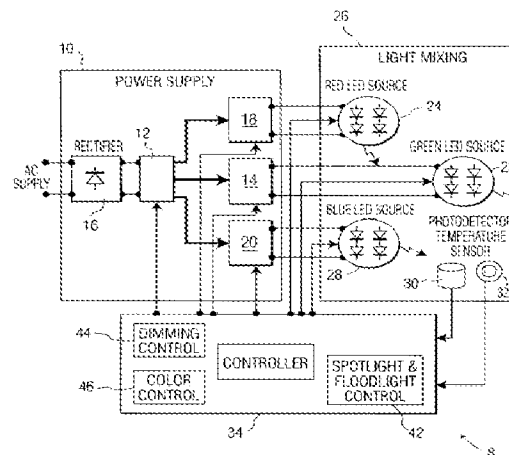


FIG. 1

In view of the aforementioned, claims 1-5, 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muthu et al by (U.S Patent No: 6,441,558) in view of Gotoh (U.S Patent No: 5,384,519) and claims 6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Muthu et al by (U.S Patent No: 6,441,558) in view of Gotoh (U.S Patent

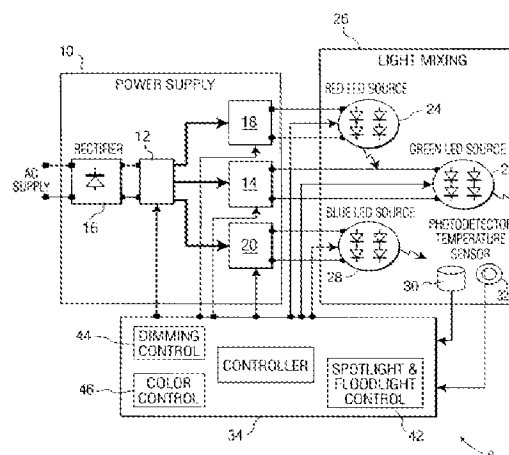


FIG. 1

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No: 5,384,519) as applied to claims 1-3 above, and further in view of and claims 7-8 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Muthu et al by (U.S Patent No: 6,441,558) in view of Gotoh (U.S Patent No: 5,384,519) as applied to claims 1-2 above, and further in view of Lebens et al (U.S Patent No: 6,488,390).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Citation of relevant prior art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Prior art Taura (U.S. Patent No. 6,670, 987) discloses a chrominance signal processing circuit.

Prior art Muth et al (Pub.No: US2002/0097000) discloses a white LED luminary light control.

Prior art Schuurmans(U.S. Patent No. 6,630,801) discloses a method and apparatus for sensing the color point of an RGB LED.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Dieu A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 AM-2: 45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Owens Douglas W can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Examiner Minh A

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Date 1/21/10

/Douglas W Owens/

Supervisory Patent Examiner, Art Unit 2821

January 30, 2010